



CITY PLANNING COMMISSION

METROPOLITAN MOBILITY

*Proposals for
Improved Transportation
to Serve New York City*

COMPREHENSIVE PLANNING REPORT
NEW YORK CITY • NOVEMBER, 1965

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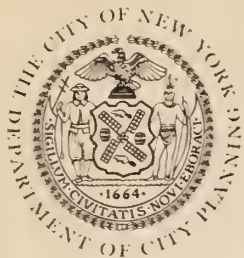


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CITY PLANNING COMMISSION

2 LAFAYETTE STREET, NEW YORK, N.Y. 10007

November 15, 1965

Hon. Robert F. Wagner, Mayor
City of New York
New York, New York 10007

Dear Mayor Wagner:

During the past few years, as you know, the City Planning Commission has been making a broad assessment of the City's transportation needs as a key element of our comprehensive planning program.

As a part of this program, we have issued a series of substantive reports dealing with important decisions in the areas of mass transit, arterial highways, off-street parking, and port development.

While New York continues to enjoy the benefits of the nation's finest urban transportation network, we must provide for improved mobility of people, vehicles, and goods if we are to keep pace with the changing access needs of our growing City and region. Current programs for transit, highway, and terminal improvements are making considerable progress in meeting these demands, but we can do better. Based on our reassessment of priorities for transportation development within the City, the Commission is recommending changes in emphasis in transportation programs.

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1. Top transportation priority should be to improve existing mass transit systems which serve Manhattan's Central Business District - the economic heart of the City and the region.

Negotiations with the New York Central Railroad and State and regional bodies should be instituted to develop rapid transit service on existing railroad lines between the Bronx and Grand Central Terminal to relieve as soon as possible peak-hour congestion on the Lexington Avenue and Eighth Avenue subways in upper Manhattan.

With the forthcoming completion of the Chrystie Street subway connection in Lower Manhattan, improved express rapid transit service can be immediately instituted between outer residential areas of Brooklyn and Midtown Manhattan. Additional express bus service from Staten Island via the Narrows Bridge should also be provided, tying-in with improved subway service in Brooklyn.

A pilot study and demonstration program should be inaugurated to improve local bus service into and through Midtown Manhattan by use of exclusive bus traffic lanes, improved bus design, and other means of making service more attractive for the short-haul rider.

2. Arterial highway programs should give priority to facilities which will by-pass traffic around the congested Manhattan Central Business District.

A new cross-Brooklyn Expressway - the missing southern link in the City's outer circumferential loop - should be expedited by taking steps to place it on the State and Federal Interstate highway systems.

3. Policies for off-street parking must be related to the role which the automobile plays in various areas of the City. This has particular relevance in the Manhattan Central District, which can be placed in serious jeopardy by arbitrary and unrelated off-street parking programs. The City should pursue its Midtown planning policies on the basis of a comprehensive planning of circulation, land use, and other interrelated phases of development in this dynamic core area.

4. The City of New York must provide modern port facilities at the best possible locations if we are to retain our pre-eminence as a gateway for passenger travel and foreign and domestic commerce.

The City should take advantage of the technical and financial resources of both City agencies and the Port of New York Authority to expedite such high-priority pier improvements as the new regional superliner passenger terminal on the North River.

5. The costs of financing improved mass transit in New York City must be shared more equitably by all concerned interests.

A review should be made by the City and State to determine the means by which growing surplus revenues of the Triborough Bridge and Tunnel Authority can be used to finance mass transit improvements in the City.

6. Development of a better, more rational transportation system will require closer coordination among the many agencies responsible for segments of the transportation picture.

A New York City Transportation Policy Council, composed of the heads of the major policy and transportation agencies, should be appointed to coordinate City transportation policy and speak with one voice on transportation matters involving regional and state agencies.

7. The City should encourage longer-range transportation planning, including technological advances which may enable us to make better use of our waterways and air space for transportation, as well as improving land arteries.

The City should work closely with the Tri-State Transportation Commission and the Federal Government to develop pilot programs to consider and test improved systems, vehicles, and operational techniques that will be of benefit to other urban areas as well as New York.

These proposed actions are merely first steps in implementing the recommended policies. The Commission's report outlines suggested programs for transit, highway, and terminal development in New York City

for the next 5 to 10 years. A longer range strategy for transit development is also included.

The Planning Commission firmly believes that the policies and programs incorporated in this report represent a sound and realistic basis for the City of New York to provide better transportation to serve the people and commerce of this great metropolis.

We stand ready to do our part in implementing these recommendations.

Sincerely,

A handwritten signature in dark ink, appearing to read "W. F. R. Ballard", written in a cursive style.

William F. R. Ballard
Chairman

CITY PLANNING COMMISSION

METROPOLITAN MOBILITY

*Proposals for Improved Transportation
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Comprehensive Planning Report
New York City • November 1965

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**CITY OF NEW YORK
CITY PLANNING COMMISSION
DEPARTMENT OF CITY PLANNING**

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INTRODUCTION

New York has become the nation's premier metropolis largely by reason of the historical evolution of superior land, sea, and air transportation facilities linking Manhattan and New York Harbor with the region, the nation, and the world. Now, however, the development of these great transport systems is failing to keep pace with the changing travel needs of the dynamic urban center which these facilities helped create. Mass transit in many areas of the City is overcrowded, slow, inconvenient, and unattractive; vehicular traffic and congestion is building up faster than our ability to provide additional highway capacity; and inefficient terminal facilities result in costly delays for passengers and goods moving into and through New York.

The City Planning Commission, in carrying out its mandate to plan comprehensively for the City, has developed policies and programs to facilitate the movement of people, goods, and vehicles within the City in the immediate future. This balanced transportation strategy is based on a careful assessment of the changing characteristics of the population and economy of the City and surrounding suburban areas. Recommended policies are closely related to other development needs of the City, and programs are geared to the realities of implementation.

The Commission's transportation proposals concentrate on high priority improvements that can be attained in the reasonably near future. The recommended improvements are believed to be physically and politically attainable, as well as financially feasible at a time when there is increasing competition among many urban programs for scarce City budget funds. The Planning Commission's program emphasizes improvements to existing transport systems which represent tremendous investments and which have the potential ability to provide a quality of service which will be acceptable in the future as well as today.

These priority transportation improvements are consistent with longer range City and regional transportation programs which are evolving from expanded planning of the various responsible agencies, including the Tri-State Transportation Commission. Longer range planning, in any event, must be kept flexible to take into account changing conditions which can never be completely predicted. The forces which will shape the pattern of the future City development cannot now be precisely measured or controlled; technological advances may radically modify transportation planning; and availability of financial resources and institutional changes can affect the direction and pace of transportation development.

TRANSPORTATION AND THE METROPOLIS

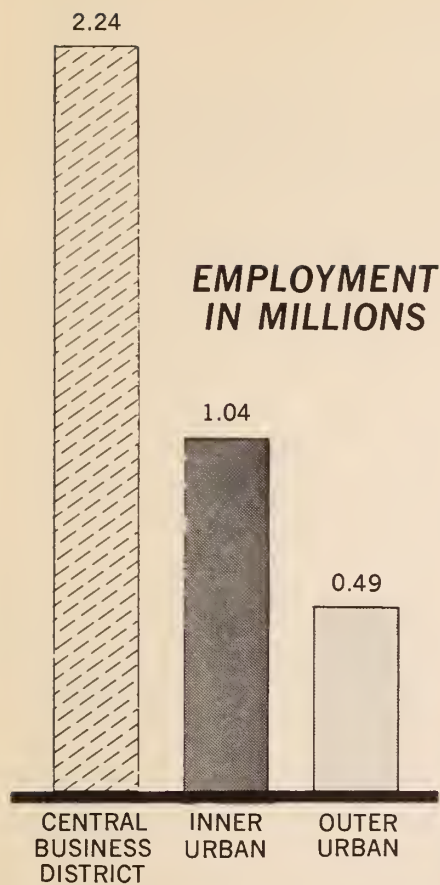
Since the days when the first sailing vessels tied up at the Battery, the destiny of New York has been inseparably wedded to the development of Manhattan Island and the transportation network linking New York Harbor with other areas of the region, the nation, and the world. More than a hundred years ago, superior marketing and shipping services brought port supremacy to New York, and gave Manhattan a commercial head start which it has never relinquished. Subsequent immigration from Europe and expansion of the City's rapid transit systems radiating outward from Manhattan sparked a phenomenal doubling of New York's population during the first third of the 20th century. Manhattan's pre-eminence as both a business and industrial center was further enhanced by the early development of railroad systems extending into the surrounding suburbs and linking New York with the rest of the nation. In recent decades, New York has had the benefit of highway and air transportation facilities excelling those of other cities.

New York's economic and cultural existence, and its problems of access, are inevitably dominated by the phenomenon of Manhattan Island — the greatest urban center the world has ever known. Commercial, industrial, and cultural activities employing two and a quarter million workers and two-thirds of the City's resident working population are concentrated in a 9 square mile area south of Central Park surrounded by the waterways of New York Harbor. This Manhattan Central Business District is the one sure growth sector of the City's economy. New York's primary role as a national and international decision-making center is symbolized by the construction since World War II of more office space in Midtown and Downtown Manhattan than in all the other cities of the country combined. While manufacturing and other goods-handling activities are gradually decentralizing to more peripheral locations, Manhattan still provides employment for more blue collar workers than the entire city of Chicago.

It must be a primary goal of the City to preserve and enhance this commercial hub by providing good transportation access for the more than three million people who daily come to work, visit, shop, and play in the center of the metropolis. The geography of the Central Business District — a high density center surrounded by water — dictates that 85 per cent of all Manhattan-bound peak period commuters must use mass transit, principally the City's rapid transit system which has made this concentration possible. The existing subway-elevated system provides direct access to the high density inner residential areas of the City which originally developed along the expanding rapid transit network. While service on this aging system is unattractive in many respects and does not serve growing residential areas in outlying sections of the City, it is an invaluable asset. The subway-elevated system must continue to handle two-thirds of all commuters to Manhattan, and has the potential, with continued modernization, to provide a considerably higher quality of service. Future expansion of express rail transit into the growing outer areas of the City, principally by tapping presently under-utilized capacity on the suburban railroads, as well as on the subway system, can give these areas the service they greatly need and also relieve the inhuman overcrowding on subway lines serving the inner parts of the City.

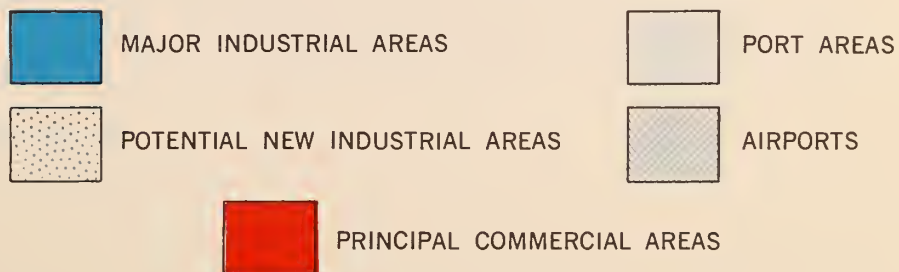
For the last century, the New York metropolis has been outgrowing its Lower Manhattan origins. By World War I, more than four million people were living in the bedroom areas of Brooklyn, upper Manhattan, The Bronx, and inner Queens. Heavy industry and port activities have likewise been steadily gravitating to waterfront locations outside of congested Manhattan. Today one million blue collar jobs are concentrated in a nearly continuous band of industry and port facilities extending from The Bronx along the Queens and Brooklyn East River waterfront to Bay Ridge on the Upper Bay.

This strategically located industrial and port strip is economically vigorous, and can continue



URBAN SECTOR

**NEW YORK CITY EMPLOYMENT
BY URBAN SECTOR 1960**



to provide employment for the large blue collar labor force living in adjacent residential areas of the City, if adequate access and other requirements for efficient industrial operation are provided. Convenient rapid transit and bus service can make many of these jobs accessible to workers living in the inner areas of the City, but access by automobile is essential for workers who live or work in locations which are difficult to reach by mass transit. Equally important, the East River industrial band lacks direct rail freight connections to the nation's hinterland and is almost entirely dependent upon truck transportation to move the raw materials and finished goods which are consumed, processed, and transhipped in this area. Improved highway access to other areas of the City and region, as well as adequate space for transfer and processing of goods, is particularly important if the Brooklyn waterfront is to retain its present dominant position of handling half the deep sea general cargo tonnage moving through the Port of New York.

In recent years, virtually all of the City's population growth has been occurring in outlying residential areas which had hereto been vacant or developed at relatively low densities. Nearly four million people now live in the outer parts of The Bronx, Queens, Brooklyn, and Staten Island; and this growth is expected to continue, particularly in Queens and Staten Island. These areas have characteristics more often in common with the suburbs than with the inner sections of the City. Many of their above average income residents hold white collar jobs in Manhattan, creating an increasing demand for more express transit service into the Central Business District. Nearly all families in these lower density areas of the City own a car, since they are dependent upon automobiles for most travel purposes except commuting to Manhattan and other central destinations. Of particular significance is the growing tendency of New Yorkers to escape the City to spend their weekends at the beach, the mountains, or the country. This auto-oriented recreational and pleasure travel will continue to rise as City residents, regardless of where they live, seek to enjoy the benefits of rising income, more leisure time, and more automobiles.

Employment for half a million workers is presently provided in the outer areas of the City by

small industrial and port concentrations, airports, and scattered commercial and service activities. While these job opportunities are likely to increase, they will continue to be a relatively small segment of the City's economic activity. Improved highway transportation will be of great benefit to these outlying centers, since they are almost completely dependent upon the truck and automobile for access.

On a broader scale, New York's role as a national and international metropolis continues to depend on air, land, and sea links with other parts of the nation and the world.

As a travel gateway for passengers, New York in the jet age has retained the pre-eminence which it acquired in the era of the steamship and the railroad train. As a result, steadily increasing domestic and international air traffic is straining the capacity of air corridors and airport facilities in the New York region. It is important to New York's continued prosperity that these growing air travel needs be met, either by building a new jetport, expanding use of existing airports, or diverting some air passengers to ground transportation modes.

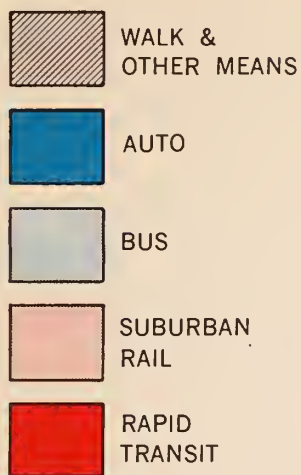
On the land, the prospect of new high speed intercity rail passenger transportation promises improved access between New York and other cities in the Washington to Boston corridor, which contains one-fifth of the nation's population.

On the sea, while the jet airplane has diverted virtually all international business travel, the growing popularity of cruises is attracting increasing numbers of tourists to New York and Manhattan.

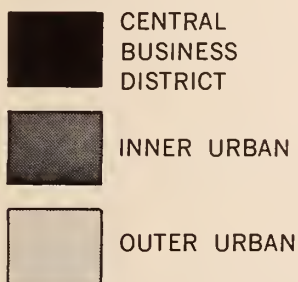
In the field of freight transportation, the Port of New York has been attracting a gradually increasing volume but a steadily declining share of the nation's high value general cargo foreign commerce. Modern cargo terminal facilities must be provided at the best possible waterfront locations if New York City is to compete successfully for its fair share of income producing ocean-borne commerce.

In summary, then, the success story of New York has left us today with a legacy of problems and opportunities stemming from maturity and continued growth.

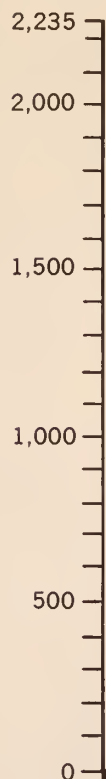
TRANSPORTATION MODE



URBAN SECTOR



WORKERS
(IN THOUSANDS)



TRAVEL TO WORK IN NEW YORK CITY TRANSPORTATION MODE BY URBAN SECTOR

MASS TRANSPORTATION

Top priority for transportation development in New York City should be to improve our mass transit systems — rapid transit, suburban rail, and bus. They have made this City possible and they are indispensable to the continued vitality of this complex metropolis centered on Manhattan Island.

While existing transit facilities leave much to be desired with respect to service quality, we have no real alternative but to build on the extensive systems now in being. Automobile transportation can play only a minor role in high density core areas and there is as yet no new transportation mode that has been demonstrated to be more efficient than rail transit for commuting to and from central urban areas.

The fact is, however, that existing mass transit systems must be greatly improved to provide fast, comfortable, convenient, reasonably-priced, and frequent service if they are to be acceptable today and in the future for both peak and off-peak travel to Manhattan and other central destinations.

TRANSIT NEEDS

New York City's rapid transit system — the IRT, BMT, and IND lines — is the backbone of the City's transportation network, linking the City's bedroom areas with the Manhattan Central Business District and other central locations. The system handles 1.7 million commuters a day; two-thirds of all Manhattan commuters arrive and leave by subway.

But despite continued modernization, the development of this 30 to 50 year old network has not kept pace with the City's changing travel needs.

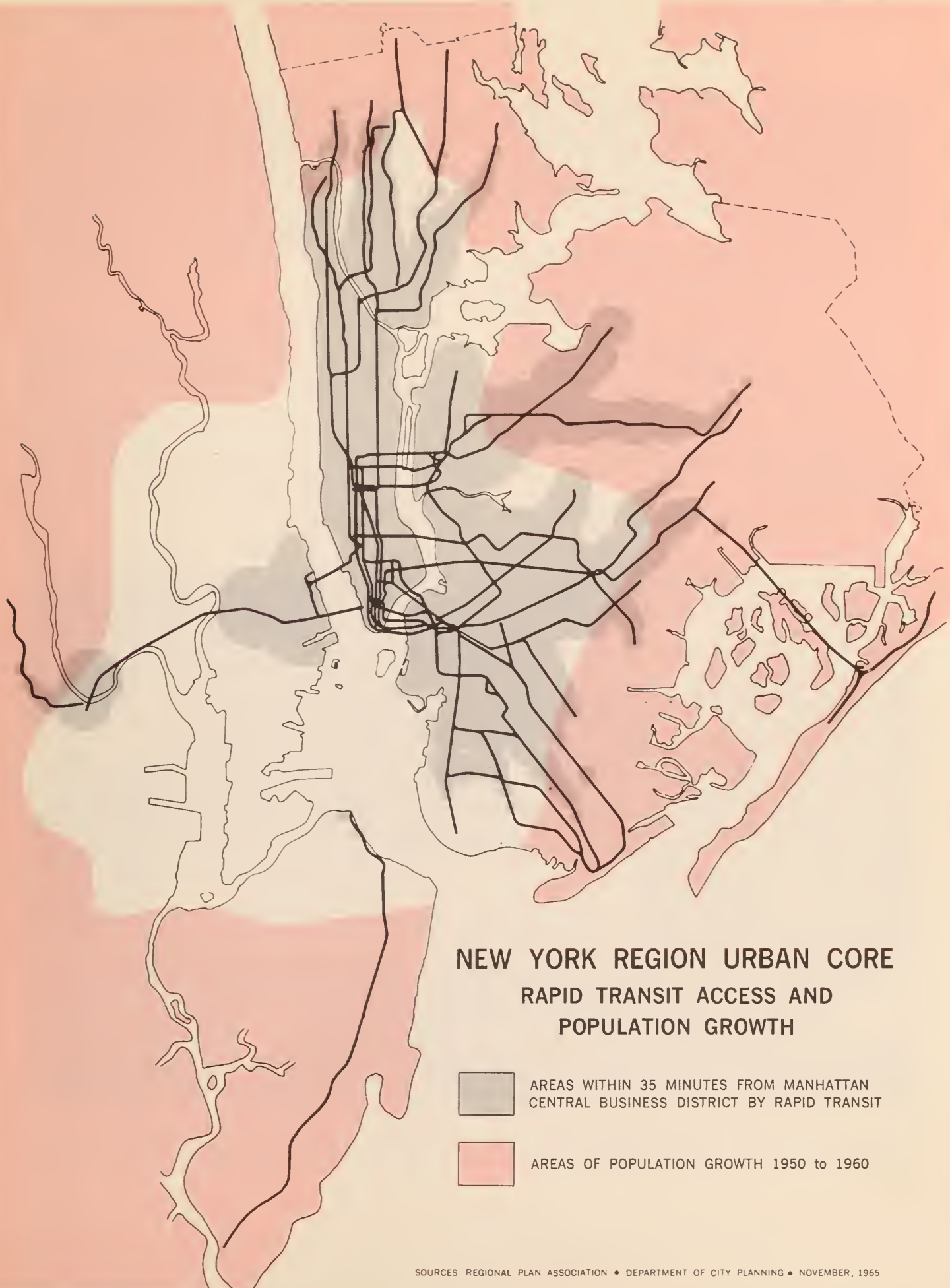
- Population and employment are shifting into areas that are poorly served by rapid transit. Population has been declining in inner areas of the City which originally developed along the transit lines and is increasing in outer residential areas extending beyond present transit terminals. As a result, there is an increasing

deficiency in express transit capacity between growing outer sections of Queens, Brooklyn, and The Bronx and Central Business District, particularly the expanding East Midtown office area which is served by only one north-south subway route.

- The quality of rapid transit service does not measure up to today's standards of urban living. Despite modernization, service is still unattractive; it is slow and infrequent in outer areas of the City during off-peak periods. The City has spent \$1.5 billion since the end of World War II for new subway cars and improved stations and line facilities, but these investments have involved mostly long overdue replacement of aging components of the subway system, rather than initiation of new standards of service.
- Rapid transit operations in New York City are caught in a growing financial squeeze between increasing operating costs and the City's policy of keeping transit fares as low as possible. Means must be found to provide the higher quality of service which most New Yorkers want, without raising fares beyond a level which lower income residents can reasonably afford.

In addition to the City's subway-elevated systems, the Port Authority Trans-Hudson system is providing improved rapid transit service between Lower Manhattan and Newark, and the Staten Island Rapid Transit system furnishes local service on Staten Island with no connections to other Boroughs of the City.

Six private suburban railroad companies provide convenient but high cost service for more than 200,000 commuters daily traveling between the Long Island, Westchester-Fairfield, and New Jersey suburban sectors and Manhattan. These existing lines have the potential ability, if modernized to contemporary service standards, to provide faster, better, and more efficient service for substantially more commuters from the fast-



NEW YORK REGION URBAN CORE RAPID TRANSIT ACCESS AND POPULATION GROWTH



AREAS WITHIN 35 MINUTES FROM MANHATTAN
CENTRAL BUSINESS DISTRICT BY RAPID TRANSIT



AREAS OF POPULATION GROWTH 1950 to 1960

growing Queens-Long Island, Bronx-Westchester-Fairfield, and northern New Jersey sectors to Midtown and Lower Manhattan. Public initiative and financing is necessary to increase the capacity and efficiency of suburban services which are vital to this metropolis but unprofitable for private railroads to provide.

Finally, 600,000 workers commute by bus daily to New York City, including 100,000 suburbanites from New Jersey. Local bus service within the City is slow (about 8 m.p.h.) due to traffic congestion and is often inconvenient due to lack of coordination among different bus and rapid transit routes and services. Means must be found to make bus service faster and more attractive to the riding public.

RAIL TRANSIT SERVICE STANDARDS

The City Planning Commission has proposed

four types of rail transit service as standards for a desirable City and regional rail service network that could be accomplished in stages to meet the needs of all commuters and other travellers throughout the City and Region. These standards could be achieved with presently available technology applied to existing rail systems, supplemented by new transit links.

Subway-Elevated

Conventional subway-elevated service, as being provided and modernized by the Transit Authority, can continue to meet the travel needs of the densely developed inner residential areas of the City now being served by rapid transit lines. Continued modernization and operational changes could raise express service speeds to 22 M.P.H., bringing areas 11 miles from Manhattan, such as Pelham Parkway, Jamaica, and Kings



EASING THE SQUEEZE Manhattan's East Side is the largest burgeoning source of new employment and yet most deficient in transit service. A high priority in the City Planning Commission's transit expansion program is to ease the pressure on such facilities as the Flushing line at Grand Central, above, by providing a new East River tunnel connecting with a new Madison Avenue trunk line.

PROPOSED RAIL TRANSIT SERVICE STANDARDS

Service Standards	Subway-Elevated	Super-Subway	Suburban Rapid Transit	Suburban Railroad
Service Territory (Distance from Manhattan)	0 - 11 miles	9 - 17 miles	15 - 35 miles	25 - 50 miles
Average Service Speed	22 M.P.H.	35 M.P.H.	45 M.P.H.	45 M.P.H.
Peak-hour Period Passenger Loading				
Passengers per Track	48,000	40,000	30,000	30,000
Per Cent Seated	30%	60%	100%	100%
Service Frequency (Outlying Lines)				
Peak Period	4 min.	6 min.	8 min.	15 min.
Off Peak	8 "	12 "	15 "	30 "
Night-Weekend	12 "	20 "	30 "	1 hour
Fare Level	15 cents	25 - 45 cents	50¢ - \$1.00	75¢ - \$1.40
Train Characteristics				
Car Type	Standard Rapid Transit	Modified Rapid Transit	Modified Rapid Transit	Standard Suburban
Seats per Car	50	80	100	125
Hourly Trains per Track	30	30	30	20
Hourly Cars per Track	300	300	300	240
Manhattan Distribution	Subway	Subway	Subway or Terminal	Terminal

Highway, within 30 minutes travel time from Midtown. As other levels of service absorb an increasing share of the passenger traffic, peak-hour subway loads should be reduced to the point where riders will be able to enter and leave trains easily and have enough elbow room to read their newspapers at the height of the rush hour. More frequent service will have to be provided in the future if the subways are to attract significant off-peak patronage. Continuation of a low, flat fare is urged for the many riders, particularly in the inner areas of the City, who must use the subway system.

Super-Subway

A new type of "super-subway" express transit service is needed to meet the commuting demands of the growing, medium density residential areas of outer Queens, Bronx, and Brooklyn. Super-

subway service, with limited modifications of existing subway operations, could offer faster, more comfortable service and attract a maximum number of longer-haul urban commuters, thus freeing subway-elevated capacity to serve the inner areas of the City.

Super-subway service would be 50 per cent faster than existing rapid transit service due to express operation between outer areas of the City and Manhattan, and the use of faster accelerating cars. Seating capacity could be 60 per cent greater at a modest sacrifice in total passenger-carrying capacity by incorporating "two and two" transverse seats in super-subway cars.

A zoned fare structure, charging more than the 15 cent subway fare but substantially less than the 75 cent commuter railroad fare within the City, is an essential part of the super-subway concept. Commuters living in the outer areas of



SUPER-SUBWAY SERVICE *The testing of new, high speed rapid transit cars on the Long Island Rail Road in Queens suggests the possibility of fast and attractive Super-subway service in the near future for commuters living in the outer areas of the City.*

the City could then elect to pay slightly more for the new, medium-priced, high-quality transit service or continue to use the existing cheaper, but slower, subway service.

Offering a higher-quality service to commuters at a modest increase in fare will reduce the total transit subsidy within New York City, helping to preserve the low, flat fare on existing rapid transit lines. The alternative is to extend additional low fare subway service to the City line. Inevitably this would result in a massive diversion of suburban rail riders to the low cost service, to the financial detriment of the suburban railroads as well as the City.

Proposed super-subway service could be operated in the future over existing suburban railroad trackage and new transit lines, as well as on existing lines of the Transit Authority.

Suburban Rapid Transit

A second new type of transit service, "suburban rapid transit," combining the convenience and efficiency of rapid transit with the comfort and speed of suburban railroads, is proposed to serve the continuously developed Long Island and Westchester-Fairfield inner suburbs where most suburban commuters reside. These trains would run express through the City into Manhattan.

This concept of modern suburban service includes the use of high speed transit car equipment, high level station platforms, and automatically collected fares to provide 50 per cent faster and more frequent service to the inner suburban commuters with no increase in present suburban railroad fares. The San Francisco Bay Area is presently building a new transit system

to these service standards, and the newly created Metropolitan Commuter Transportation Authority is advancing a similar modernization program for the Long Island Rail Road.

Car equipment for the proposed new suburban service, except for "3 and 2" seating arrangements and air conditioning, could be basically similar to super-subway cars, thus permitting future operations on subway lines into Manhattan terminal areas.

Suburban Railroad

Existing suburban railroad service can be adapted to serve the commuting needs of the lower density outer suburbs in the Long Island and Westchester-Fairfield sectors, and possibly New Jersey, which are too dispersed to support rapid transit type service and which can be served by existing suburban railroad equipment for a considerable future period. With extension of electrification into these areas, newer suburban multiple unit cars will be able to provide fast express operation from the outer suburbs directly into Manhattan.

EXPRESS TRANSIT PROGRAM

Within the framework of changing commuter travel demands and proposed transit service standards, the City Planning Commission has developed a program of major transit improvements designed to meet the most pressing current needs while providing for the future. By maximizing the use of existing facilities, express rail and bus service can be extended in the near future to many growing areas of the City and region, thus reducing overloads in the inner areas of the City. While ongoing planning may suggest modification of these proposals, they represent an approach which the Planning Commission believes is the soundest investment in improved mobility for all New Yorkers in the years immediately ahead.

Queens Sector

It is clear that a new rail tunnel under the East River into Midtown Manhattan is the key to breaking the transit bottleneck in the Queens-Long Island corridor — the fastest growing residential sector of the City and region which

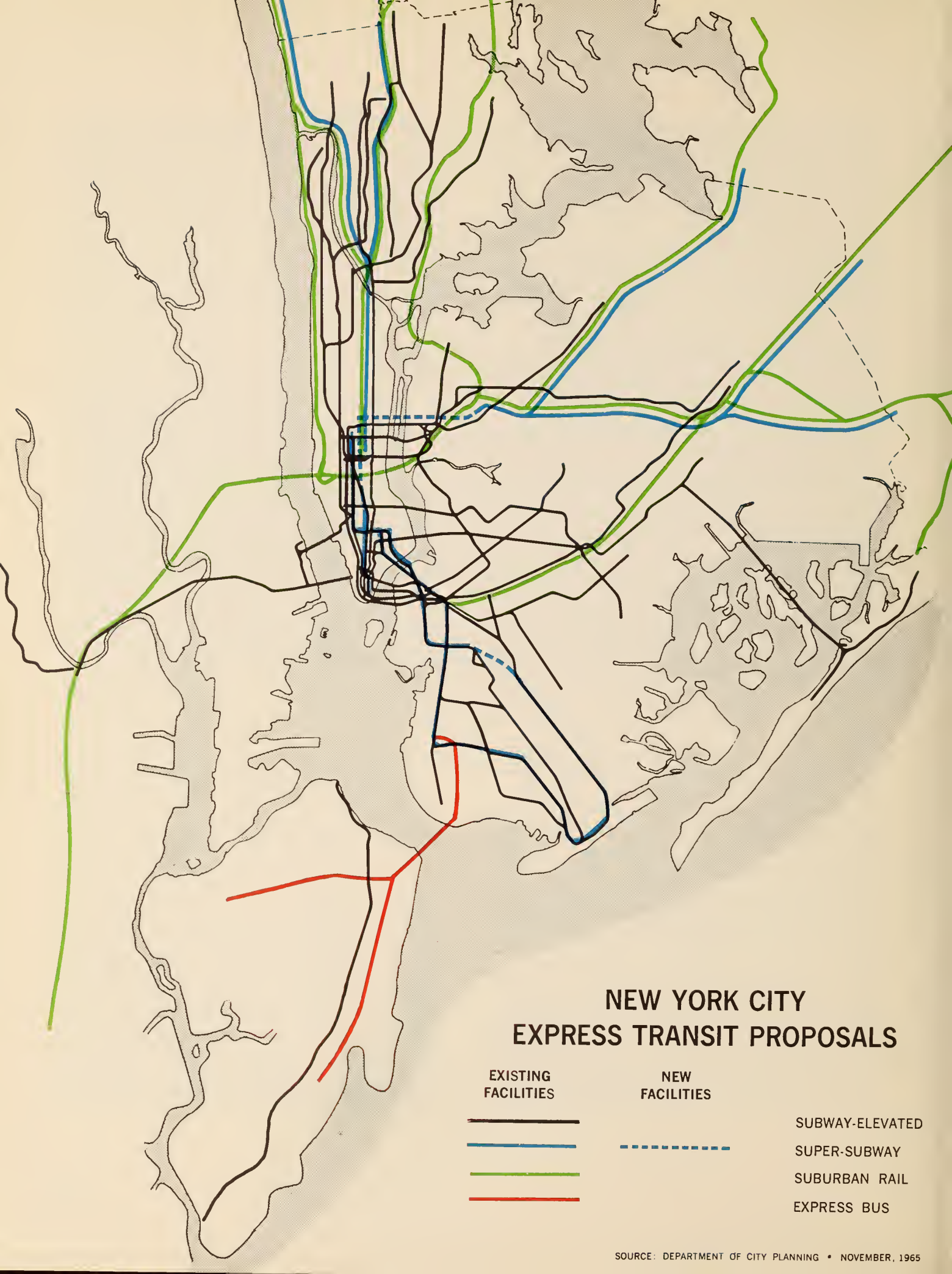
suffers from a transit capacity deficiency equivalent to 22,000 peak-hour riders. The planning of this strategic link must now be expedited in a manner to insure that it will fit logically into a future City-regional transit system.

The fastest, least expensive, and best way to make this tunnel capacity available to Queens and Long Island commuters is to tie it into existing trackage of the Long Island Rail Road which has potential capacity to handle considerably more trains due to the bottleneck presently imposed by the East River. Super-subway transit service through the new tunnel to outer Queens and inner Nassau might be developed in stages on the Port Washington, Main Line, and Atlantic Branches to provide fast, convenient service to a maximum number of commuters while leaving adequate track capacity available for expanded suburban service into Penn Station and Flatbush Avenue, Brooklyn. This approach would provide considerably faster, more comfortable service to more present and future Queens riders than waiting years for the more costly alternative of building new conventional local subway lines into outer Queens.

Bronx-Manhattan Sector

It is equally important that additional transit capacity be provided in the upper Manhattan and Bronx sector of the City to relieve the present 30,000 peak-hour passenger overload on the 8th Avenue and Lexington Avenue subways.

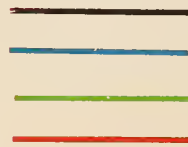
The only possible way to accomplish this objective in the near future would be to operate rapid transit service over existing New York Central Railroad trackage between The Bronx and Grand Central Terminal. With certain operational changes, it may be possible to operate super-subway service for as many as 26,000 peak-hour Bronx commuters in addition to the suburban service on the Harlem and Hudson Divisions of the New York Central. This might be accomplished by removing junction and station bottlenecks in the vicinity of Mott Haven in The Bronx and by diversion of some Hudson Division suburban trains into Penn Station via the West side freight line. (A connection into Penn Station from the West Side line is being contemplated as part of the Pennsylvania-Central merger plans.) Improved transfer facilities



NEW YORK CITY EXPRESS TRANSIT PROPOSALS

EXISTING
FACILITIES

NEW
FACILITIES



SUBWAY-ELEVATED
SUPER-SUBWAY
SUBURBAN RAIL
EXPRESS BUS

with the subway system could also be provided at 149th Street in The Bronx near the proposed Civic Center.

In Midtown Manhattan, construction of a new deep level tunnel under Madison Avenue from Central Park to Madison Square is an essential link with the proposed Queens and Bronx improvements. Tying in with the new East River tunnel and Grand Central Terminal, this short trunk line would provide direct delivery to the heart of the East Midtown office and retail district between 2nd and 6th Avenues; it would also provide direct service to the Downtown Financial District via the existing BMT Broadway line.

In addition, we should begin planning for a new East Side subway, at least from The Bronx to Midtown Manhattan. Recommended transit improvements can provide interim relief during the decade or more it will require to plan, finance and construct the future trunk line.

Brooklyn Sector

More and faster express transit service is needed to connect the growing outer residential areas of Brooklyn with Manhattan. With the forthcoming completion of the Dekalb-Chrystie Street-6th Avenue improvements, there will be a number of ways by which this improved rapid transit, either subway or super-subway, can be provided.

A new express service on the BMT 4th Avenue and Sea Beach lines could bring the expanding Coney Island area within 30 minutes travel time of Midtown Manhattan.

Additional express service should also be planned in southeast Brooklyn to relieve congestion on the Brighton line and serve new residential development. A short connection between the 6th Avenue and Brighton lines in the vicinity of Prospect Park would be one way to accomplish this purpose. Improved feeder bus service could bring new residential areas near Jamaica Bay within easy access of expanded Brighton express service as well as Nostrand Avenue IRT service.

Staten Island Sector

The accelerating development of Staten Island likewise demands that means be found in the im-

mediate future to improve commuter transit access to Manhattan by faster, more direct service.

The quickest way to achieve this objective would be to provide expanded express bus service from communities in Richmond across the Narrows Bridge to the proposed Sea Beach-4th Avenue express rapid transit service at 59th Street in Brooklyn. Many Staten Islanders would thus have one transfer service to Midtown as well as Downtown Manhattan in less than 45 minutes.

The Staten Island Rapid Transit system has great under-utilized potential. In the short run, new car equipment is needed to provide improved service connecting with the Manhattan ferry at St. George. In the longer run, the possibility of express rail service directly from Staten Island to Downtown Manhattan via the New Jersey Bayonne peninsula should be explored. Other alternative long range uses of this system should also be considered.

When and if high speed water transportation by hydrofoil or hovercraft vehicles becomes economically feasible, Staten Island would be a logical place to begin such service to Downtown and Midtown Manhattan.

New Jersey Sector

The continued development of northern New Jersey and Rockland County suburban areas is reflected in increasing volumes of commuting into Manhattan.

No definitive plan for improved trans-Hudson commuter facilities can be developed, however, until there is a rationalization of the respective roles which the suburban railroads and buses should play in serving New Jersey residential areas which have developed at lower densities than communities east of the Hudson.

At the same time, it is clear that the Pennsylvania Railroad tunnels into Penn Station are the only existing trans-Hudson crossings which have potential capacity to carry significantly more New Jersey commuters into Midtown. Both rail and bus feeder service should be designed to connect with expanded Pennsylvania service in the Jersey Meadows.

The possible need for additional transit tunnels under the Hudson should be taken into account in longer range transportation planning.

Program Summary

The Planning Commission's City-wide program of expanded express transit service, making maximum use of existing subway and suburban rail trackage, would cost about \$500 million during the next 10 years over and above essential programs for continued modernization of the existing rapid transit system. This is a costly program, but the alternative is to commit the City now to a \$1 billion program of new low-fare subways which could provide only local service a decade from now and which would involve a much greater financial drain on the City's treasury.

LOCAL TRANSIT PROGRAM

In addition to providing more express transit capacity into the outer areas of the City, modernization of the existing rapid transit system, requiring investments of about \$65 million a year, must continue to have a high priority to assure attractive subway service for all New Yorkers. Costly replacement of obsolete cars, signals, and electrical systems may not always be apparent to the riding public, but it is essential for dependable, high quality service. Operational improvements, including skip-stopping and

"three and one" (triple track) operations during peak-hours, can provide expanded and faster service on existing lines of the rapid transit system. Equally important is the improvement of stations, including installation of more escalators and imaginative signs and maps to guide native New Yorkers as well as visitors.

Local bus service within the City must also be improved, at a continuing capital cost of about \$15 million annually, if it is to be attractive to City residents:

- Closer coordination of routes and schedules, including improved feeder service and transfers with rapid transit, could result in better service as well as more efficient operation.
- Traffic lanes for exclusive use of buses in congested central areas would help speed up service.
- Bus shelters at major stops and transfer points as well as improved signs and maps would also make bus service more attractive.
- The transit industry should continue to improve on present bus designs, facilitating passenger flow, and developing vehicles which are better adapted to operations in congested urban areas.

CENTRAL AREA CIRCULATION

In addition to providing convenient access to the Manhattan Central Business District and other centers, New York's mass transit systems must deliver passengers reasonably close to their final destinations and facilitate travel within Manhattan. Indeed, easy circulation within the Midtown and Downtown cores is an indispensable element of any transit system that is designed to attract peak and off-peak passengers who presently drive to Manhattan.

The City Planning Commission is impressed

with the need to preserve Manhattan's attraction to people. Most of the one and one-half million daily workers and visitors in Midtown end up as pedestrians; walking to work, or to shops, or theaters, restaurants, or other destinations. The Commission, therefore, has given extensive consideration to the kind of circulation system that the Midtown area needs. A major planning study, meanwhile, is in the process of developing specific circulation proposals for the Downtown Lower Manhattan core area.

FIRST STAGE

The key element in the Commission's Midtown circulation plan is the previously proposed Madison Avenue subway from Central Park to Madison Square. It would accomplish the following objectives:

- Deliver commuters from the growing Queens and East Side Manhattan-Bronx sectors of the City to within easy walking distance of most of the Midtown area east of 6th Avenue. This is the fastest expanding business center in the City; it provides more than half of all Midtown jobs but is served by only 30 per cent of presently available north-south subway capacity in Manhattan.
- Provide ideal access for shoppers and other mid-day riders destined to the Midtown retail district concentrated along Fifth Avenue.
- Furnish a new direct connection between the Midtown and Downtown core areas to the advantage of both business centers as well as Queens and Grand Central commuters.

Improved east-west transit distribution is also needed within the Midtown area. A higher quality crosstown transit service in the vicinity of 49th-50th Streets would fulfill several functions:

- Serve Midtown office, shopping, theatrical, and commercial areas extending from the United Nations on the east to the Superliner Piers on the west.
- Provide crosstown distribution for all north-south subways, including the proposed Madison Avenue line.
- Provide crosstown distribution for Westchester and Bronx passengers via new concourse facilities at the north end of Grand Central Terminal.
- Encourage motorists to park on the periphery of Manhattan rather than in the Midtown core.

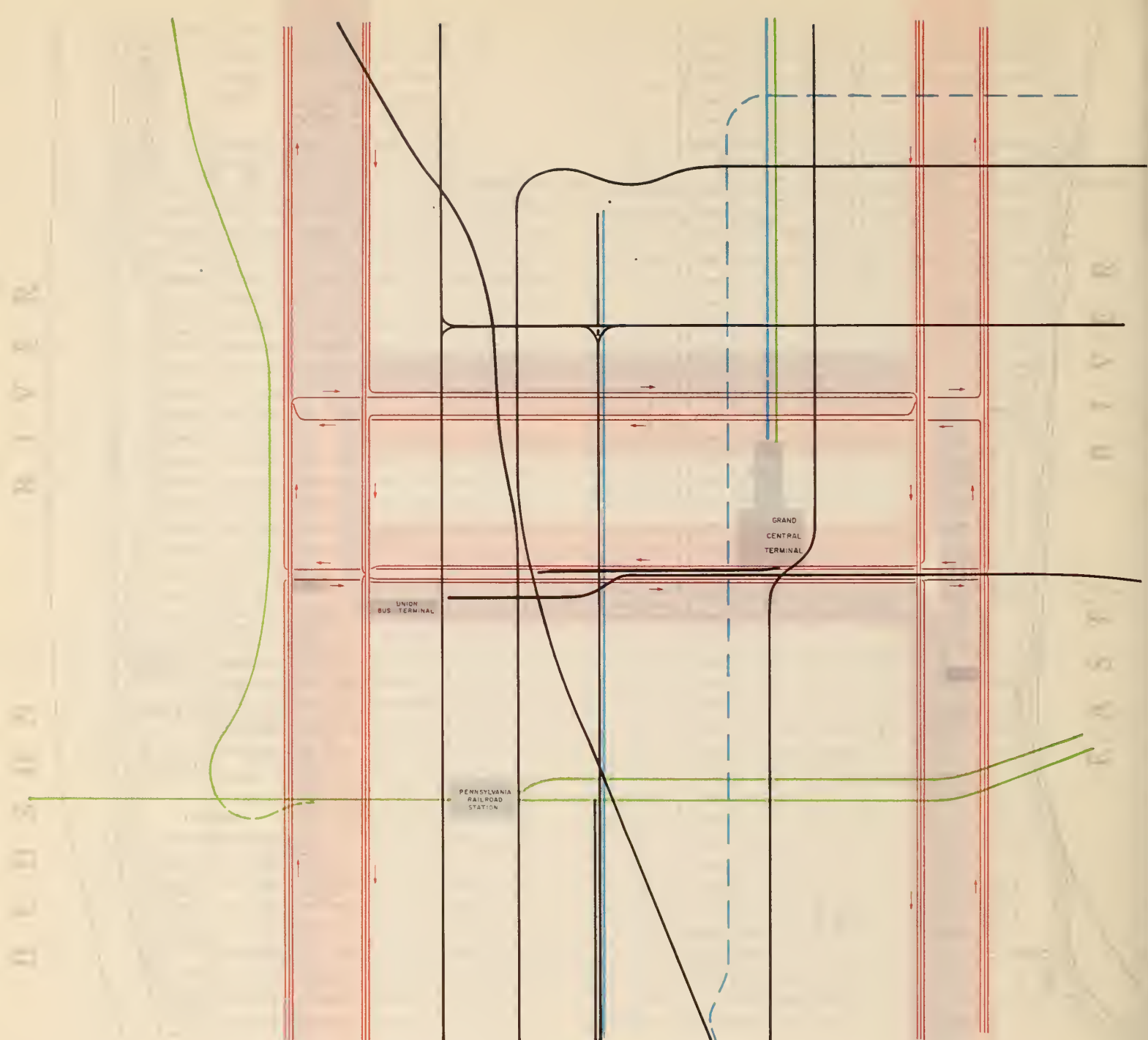
Such a crosstown system might initially be provided by buses or other special transit vehicles operating in exclusive traffic lanes on existing streets.

Improved bus service into the Midtown area from nearby residential areas on the East and West sides might also be realized by giving buses higher traffic priority on 1st, 2nd, 9th and 10th Avenues and routing these buses directly into crosstown service on 49th-50th Streets and on 42nd Street.

SECOND STAGE

Additional circulation facilities should be provided in Midtown in the future as detailed planning and financial programs are developed. Several proposals are advanced to illustrate the kind of total system that is needed to meet present and future passenger circulation requirements in this strategic area:

- A new rail tunnel connection under Park Avenue between the existing 33rd Street East River tunnels of the Long Island Rail Road and the lower level of Grand Central Terminal would provide much needed direct access to the growing East Midtown area for Long Island commuters who presently are required to back-track from Penn Station.
- A similar connection under Madison Avenue between the existing 33rd Street tunnels east of Penn Station and Grand Central would provide direct access for New Jersey commuters to East Midtown as well as Westchester commuters to the Herald Square area. Such a link would also facilitate improved high speed intercity rail service in the Washington to Boston corridor by providing a more direct connection between the New Haven and Pennsylvania Railroads than the present Hell Gate Bridge route.
- In the longer range future, a Midtown subway loop might be created by tying in portions of the 42nd Street shuttle with a new line in the vicinity of 49th Street. Such a loop would give the highest quality access to areas which are now on the periphery of the Midtown core; it could also provide east-west distribution for any future East Side subway.

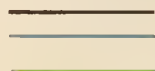


MIDTOWN MANHATTAN-TRANSIT PROPOSALS

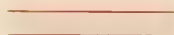
FIRST STAGE

EXISTING
FACILITIES

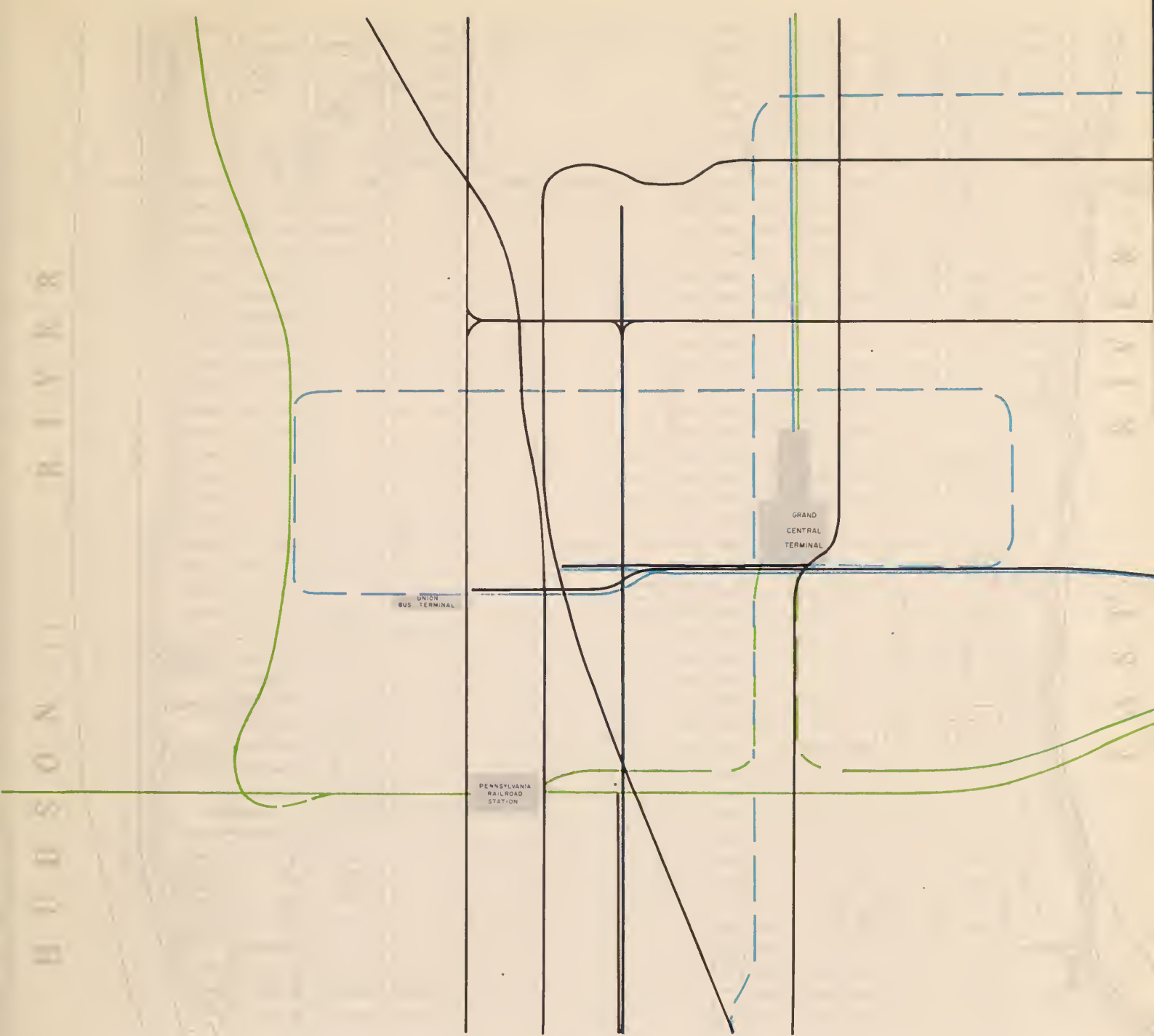
NEW
FACILITIES



SUBWAY
SUPER-SUBWAY
SUBURBAN RAIL



BUS DISTRIBUTION SYSTEM



MIDTOWN MANHATTAN-TRANSIT PROPOSALS

SECOND STAGE

EXISTING FACILITIES	NEW FACILITIES	
		SUBWAY
		SUPER-SUBWAY
		SUBURBAN RAIL

NEW TECHNOLOGY

In planning for transportation facilities that will be with us for generations, we cannot afford to ignore the likelihood that urban transportation will undergo a technological revolution in the next several decades.

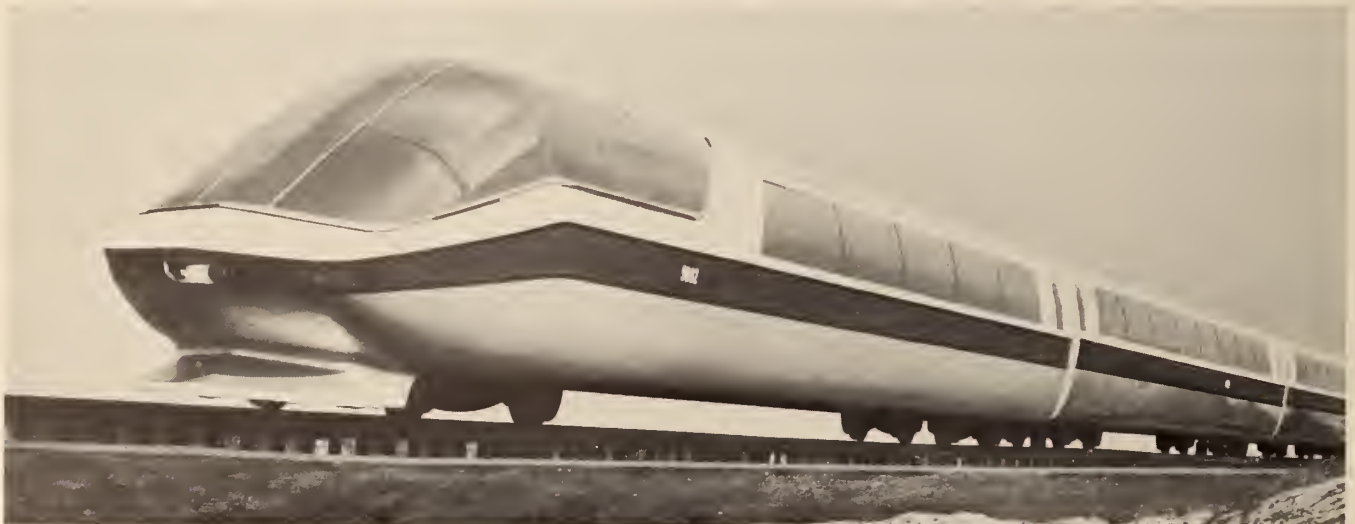
Today, passenger transportation in urban areas continues to be provided by three conventional modes — automobile, bus, and train — and the feasibility of radical new systems remains to be proved. But there are many technological innovations that can be applied to these existing systems, if we have the initiative to take advantage of technical advances. Experience in the San Francisco Bay Area, for instance, indicates clearly that many of the advantages claimed for exotic forms of transportation, such as the monorail, can be adapted to conventional rail transit systems to provide attractive and efficient service geared to meet the central commuting needs of our changing urban society. There is every reason to expect, furthermore, that when and if the public becomes insistent, the transit industry can and will develop a bus that can operate without spewing out diesel fumes wherever it goes.

We must keep an open mind as to future de-

velopments in the field of transportation. The fact that present helicopters and hydrofoil boats, for instance, are too costly for mass usage should not blind us to the potential advantages of using New York's waterways and air space as substitutes for building expensive new land transportation channels through our heavily developed urban areas.

In the longer range future, a technological breakthrough could conceivably develop a transportation system combining the flexibility of the automobile with the space efficiency of rail transit trains. Indeed, it might be argued that without such a radical advance in transportation it will be practically impossible to ever provide really fast, mobile, personal transport in a city as large and densely developed as New York.

Agencies responsible for transportation development in the New York area must be aware of technological changes, and encourage the evolution of new systems and techniques that will improve the mobility of movement in our metropolis. Even more important, we must beware of rigid commitment to long range transportation programs that might be obsolete the day they are completed.



NEW TRANSPORTATION TECHNOLOGY Modern inter-city trains, capable of speeds up to 150 miles per hour, might provide two-hour rail service to Washington and Boston. We must be mindful of new breakthroughs in transportation technology and avoid overcommitment to transportation programs that may be obsolete by the time they are completed.



SOUTHERN ARTERIAL BY-PASS A Cross-Brooklyn Expressway, connecting the Narrows Bridge with the Nassau Expressway in Queens, is superimposed on aerial photograph to dramatize the importance of this facility to handle traffic from New Jersey and Staten Island (foreground) to Brooklyn, Queens and Long Island beyond, by-passing the congested Manhattan Central Business District (left center). The proposed new expressway will also provide badly needed local traffic relief in Brooklyn.

ARTERIAL HIGHWAYS

Even with the best mass transit systems, New York City needs an expanded network of arterial highways to handle increasing volumes of traffic to destinations other than Manhattan. Highway facilities must serve a number of vital transportation functions — journey-to-work travel to employment centers outside of Manhattan; truck access to industrial, commercial, and port areas; pleasure and recreational travel; and through traffic between Long Island, New Jersey, and New England. Ways must be found to provide the increased highway capacity needed to meet these expanding travel requirements.

ARTERIAL NEEDS

Highway builders over the years have provided New York with the best urban highway system in the Nation. A four billion dollar regional network of radial expressways, parkways, and river crossings focused on Manhattan has been supplemented, in recent years, by circumferential facilities around the periphery of the City.

Present and future traffic needs, however, will require substantial expansion of the 200 miles of arterial facilities that have already been built:

- The City's outer circumferential loop, which has been the top highway priority for the last decade, remains to be completed. The northern by-pass, extending from the George Washington Bridge to the Clearview Expressway in Queens, has yet to be connected to the potential southern by-pass provided by the Narrows Bridge.
- Inner circumferential facilities should be provided to serve the industrial and port areas of Brooklyn, Queens, and The Bronx and to help by-pass a maximum amount of commercial and other vehicular traffic around the congested Manhattan core.
- Additional radial and circumferential links should be planned to close gaps in the existing arterial network and to provide expressway

coverage in areas of the City, such as Brooklyn, which are not served by existing arterial facilities.

INTERIM POLICIES

As a practical matter, New York City is too intensively developed to permit construction of a highway system that will ever be congestion free. Expressway construction is too costly and disruptive of residential and commercial areas, particularly in the inner sections of the City, to achieve a free flowing arterial system in the near future. It is essential, therefore, to develop an interim highway program that concentrates on high priority facilities that are of maximum benefit and immediately feasible.

The interim highway program proposed by the City Planning Commission is based on the following principles:

- No additional highways should be initiated or programmed which will attract more traffic into and through the congested Manhattan Central Business District.
- The arterial network should be designed to complement the region's mass transit system, rather than compete with it.
- Expressway development should be planned and programmed to minimize disruption of existing residential, industrial and commercial activities.
- The "expressway," or combined traffic facility, can serve urban travel needs better than the "parkway," which does not accommodate trucks and buses. The development of highways through heavily urbanized areas for the exclusive use of pleasure drivers is an obsolete and wasteful concept.

INTERIM PROGRAM

The high priority expressways proposed by the City Planning Commission represent a program that could be achieved well within a decade and



AUTOS IN THE OUTER BOROUGHS Increased dependency upon the auto for work and pleasure travel is evidenced in the outer boroughs of New York, outside the congested Manhattan core. Heavy use of existing expressways even during off-peak hours indicates need for additional facilities to provide relief in these areas.

provide a sound basis for future arterial programs. Expansion of the highway system, however, beyond these interim projects, particularly through the heavily developed inner sections of the City, should be undertaken in close coordination with future renewal and planning programs, especially the regional development planning of the Tri-State Transportation Commission.

Cross-Brooklyn Expressway

A new Cross-Brooklyn Expressway is proposed to close the missing southern link in the City's outer circumferential loop around Manhattan. Transportation planners have long contemplated a highway across Brooklyn along the Long Island Rail Road Bay Ridge corridor; this new route would extend for some 12 miles from the Verrazano-Narrows Bridge to the Interborough Parkway in the vicinity of East New York and the new Nassau Expressway west of Kennedy Airport.

The proposed facility would provide a new, direct route for commercial traffic from Long Island to New Jersey, and would divert a maximum of through traffic from the congested Manhattan core via the new bridge.

The Cross-Brooklyn Expressway is urgently needed to serve the work and pleasure travel

needs of residents of Brooklyn, the biggest "city" in the country without interior expressway access. This facility would also keep the growing volume of the Narrows Bridge traffic off local streets in Brooklyn.

The proposed expressway, furthermore, would provide improved truck and auto access to existing and potential industrial and port concentrations in outer areas of the City.

Most importantly, a new highway along the Long Island Rail Road line, if carefully designed, could be built with a minimum of costly condemnation of homes and industry as compared with any alternative route across Brooklyn.

This highway should be placed on the State and Federal Interstate highway systems at the earliest possible date.

Lower Manhattan Expressway

The Lower Manhattan Expressway, now approved and pending construction, will complement the City's outer loop system by providing the last remaining link in an arterial route through the core of the region. Located between the Manhattan Downtown and Midtown cores, the expressway will connect existing river crossings and express highways on the East and West sides of Manhattan, as well as link up Brooklyn

and New Jersey arteries. In addition to speeding up the flow of traffic across Lower Manhattan, including trucks serving the industrial heart of the region, the expressway will free up north-south and other local traffic on the surface streets.

This strategic facility should be planned in a manner to assure that it will fit into the fabric of the City. By imaginative design of the highway and adjoining areas, the expressway can offer more in beauty and economic opportunity to the community than it might take away.

Richmond Expressway

Three new limited-access north-south highways — the Richmond Parkway, West Shore Expressway, and Shore Front Drive—are currently programmed to serve the growing local and through-traffic needs in Staten Island. On the basis of emerging development patterns, there is question whether proceeding with all three facilities, as they are now designed, represents the wisest course of action. Highest priority should clearly be given to a facility running through the center of the Island.

The Richmond Parkway, designed at present for automobile traffic exclusively, is programmed for early construction through the middle of Staten Island connecting the Verrazano-Narrows Bridge with the Outerbridge Crossing, the City's northernmost gateway to New Jersey. Flanking this highway is a parallel West Shore expressway for commercial traffic along the undeveloped west side of the Island, and a Shore Front Drive along the east shore.

The Richmond arterial route, if designed to expressway standards, could fulfill the present through-traffic needs of both these highways, and also provide local access to the partially developed southern section of the Borough. In this event, the West Shore Expressway could be deferred until a later date when development along its route is more imminent. A reassessment of the need for and timing of the Shore Front Drive is also indicated.

Even if it is decided to proceed now with construction of the West Shore facility, the proposed Richmond Parkway should still be built to expressway standards which would entail minor

design modifications without compromising on aesthetics. The present parkway design would preclude the accommodation of transit and commercial traffic needed to serve the growing residential and commercial areas in the center of the island. Trucks and buses would forever be required to use local streets running through residential areas. This consideration takes on added significance with the development of a major commercial complex located in the center of the Island, adjacent to the route of the programmed Richmond Parkway.

Nassau Expressway

The presently committed Nassau Expressway in Queens will provide needed additional east-west highway capacity between Nassau County and eastern Queens in the vicinity of Kennedy International Airport. Connecting at its western terminus with the proposed Cross-Brooklyn Expressway, this facility will be a key link in a future southern arterial route generally paralleling the more northerly path of the Long Island Expressway.

Bruckner and Sheridan Expressways

Presently planned extensions to the Bruckner and Sheridan Expressways in The Bronx will provide needed connections to major existing highways. The Sheridan Expressway will be extended north to link The Bronx River Parkway with the existing Bruckner Expressway and the Triborough Bridge. The Bruckner Expressway will be extended in a north-easterly direction to link up with the Hutchinson River Parkway and the New England Thruway.

ADDITIONAL MANHATTAN-ORIENTED SCHEMES

In developing its interim highway program, the Planning Commission has carefully evaluated other routes which are in various stages of planning and conjecture — including the proposed Bushwick Expressway, Queens Midtown Tunnel Third Tube, and the 30th Street Expressway, designed to penetrate into and through Midtown Manhattan.

Since the primary effect of these facilities would inevitably be to attract increased peak-hour auto traffic into the already congested Midtown core, they were rejected as unnecessary and unsound. This costly system would also directly compete with the City's already committed program to expand mass rail facilities to serve the growing Queens-Long Island corridor. Though the system would add appreciably to congestion

(and increase pressures for more parking garages in the City's core), it could not at best carry more than three per cent of total Queens peak-hour commuter traffic.

This expensive network of highways, furthermore, would cut a swath across the center of the City and result in a massive dislocation of residential, commercial, and industrial activities.

OFF-STREET PARKING

The provision of storage space for automobiles is a major problem in New York City which has a much higher density of development than any other city. Policies for off-street parking, therefore, must be closely related to the role which the automobile plays in meeting various travel needs in different areas of the City.

RESIDENTIAL AREAS

It is clearly recognized that an increasing number of New Yorkers in all residential communities of the City own and use automobiles, at least for social and recreational travel.

Current zoning policy accordingly requires that all new housing provide parking facilities for residents, ranging from one car space for each housing unit in outer areas to one space for each 2½ apartments in the highest density residential areas in Manhattan. Only half as many parking spaces are required in lower income public housing.

The recent trend toward greater use of rental cars, however, is a new factor affecting the problems of parking in central residential areas and remains to be evaluated for its longer-range implications.

OUTLYING COMMERCIAL AND INDUSTRIAL AREAS

New Yorkers living outside of Manhattan are dependent upon their automobiles for most travel purposes except commuting to Manhattan and other areas readily accessible by mass transit.

Improved parking facilities, therefore, must be provided in the city's outlying commercial and retail centers if these centers are to compete effectively with new suburban shopping malls which are attracting increasing numbers of customers from the growing residential areas near the fringes of the City.

New industrial parks, as well as existing industrial concentrations in Brooklyn, Queens, and The Bronx, must also provide adequate parking space to accommodate employees whose journey-to-work cannot be conveniently made by mass transit.

More "park and ride" parking facilities should also be built at appropriate locations outside Manhattan to encourage Manhattan-bound commuters and other motorists to transfer to rail transit before reaching the traffic bottlenecks at the river crossings and on the congested streets of Manhattan. Such facilities can attract many riders if they are designed to provide an easy transfer to fast and frequent transit service.

MANHATTAN CENTRAL BUSINESS DISTRICT

The problem of providing for the space needs of the automobile — whether moving or at rest — is most critical in the Manhattan Central Business District south of Central Park. Intense economic competition for favored central locations in Manhattan has resulted in concentrations of urban activity that are unparalleled on the face of the earth. Employment densities greater than 2,000 workers per acre — a phenomenon made possible by skyscraper construction and by a highly developed mass transit network — have forced the automobile to take a back seat in Midtown and Downtown. Private automobiles move less than 10 per cent of the people coming into these core areas every day.

But despite problems of congestion and cost, the convenience of the automobile has made it increasingly popular for many travelers to Manhattan. This trend has stimulated a 3 per cent annual increase in off-street parking capacity in the Midtown area in recent years.

The City Planning Commission, while recognizing that some trips to the Central Business District are appropriately made by auto, is convinced that a policy of continued expansion of off-street parking capacity and encouraging more people to drive into the heart of Manhattan will hinder rather than serve the development of the Central Business District.

This conclusion is based on the following observations:

- Expansion of off-street parking capacity of any kind in central Manhattan will generate more automobile travel during both peak and off-peak hours. Experience to date indicates that more off-street parking attracts more drivers from a potentially inexhaustible urban travel market, rather than diverting motorists who presently park on the streets for one reason or another.
- Existing highways and river crossings entering the CBD are presently used to capacity during peak-hours. More parking facilities in Manhattan would generate pressures to expand this highway capacity, which could be accomplished only at great cost and disruption

of heavily developed residential and commercial areas of the City.

- The Midtown street system is now virtually saturated by traffic throughout the business day, and cannot practically be modified to accommodate significantly more automobiles in addition to the taxis, buses, trucks, and pedestrians which must circulate in the busy Midtown area.

One exposure to the Midtown shopping district at mid-day will substantiate traffic counts which indicate that there is no such thing as an off-peak traffic “lull” in this busy area. The high density of development in Midtown — as well as Downtown — precludes any major physical changes in the street system in the foreseeable future, and improved traffic control systems promise only marginal benefits in core areas already saturated with traffic on crosstown as well as north-south arteries. Any future restrictions of on-street parking and stopping in Midtown must realistically allow for the cabs, buses, and trucks which represent most of the vehicles circulating in the core.

With the Midtown street system at virtual capacity, it follows that the convenience accruing to a small minority of motorists from any substantial increase in off-street parking would be far offset by further inhibition of commercial, bus, taxi, and pedestrian circulation which represents the vast bulk of travel movement into and within the Midtown area.

- Manhattan's priority transportation need is improved peak-hour transit access to accommodate economic growth rather than off-peak parking facilities to stem a feared economic decline. In addition to an unprecedented office boom, Manhattan has been enjoying an increase in retail sales volumes, in contrast to declines in the Nation's five next most important retail centers. Manhattan department stores must face the fact that their future is dependent upon customers who are workers, visitors, and residents in Manhattan, rather than futilely trying to become “drive in” competitors of their own branches in suburban shopping centers. (The largest new department store in the region was recently opened



OFF-PEAK TRAFFIC—A MIDTOWN MYTH Throughout the working day, Midtown Manhattan is saturated with vehicular and pedestrian traffic. Typical mid-day scenes point up existing problems that would be seriously aggravated by inviting any more vehicles into Midtown during the so-called "off-peak" period between the rush-hours.



in Midtown Manhattan — with only limited parking facilities.)

Most travellers to Manhattan can and do use rail and bus transit systems which are being greatly improved at a cost of billions of dollars to accommodate peak-hour travel demands. It would clearly be in the public interest to encourage more people to use under-utilized off-peak transit service, rather than fostering the competitive development of off-street parking facilities which would divert even more riders from the publicly financed transit system.

Businessmen who need to drive to Manhattan can and do use existing parking facilities.

- Future commercial development of the Midtown and Downtown core areas would be inhibited by over expansion of off-street parking capacity in strategic central locations.

To be within easy walking distance of Midtown offices and stores, off-street parking facilities must necessarily pre-empt valuable sites in the core-scarce sites which will be needed for future expansion of office and related employment and tax generating activities, rather than less productive parking uses.

Proposed Parking Policies

In light of these considerations, the Planning Commission has formulated specific policies to rationalize the development of off-street parking facilities in the Manhattan Central Business District and other central locations including Downtown Brooklyn.

- Zoning loopholes should be closed to prevent commercial parking garages from being constructed in high density commercial areas under the guise of being accessory to residential or commercial buildings.

The zoning ordinance requires a special permit by the City Planning Commission for construction of any new commercial garage in Manhattan south of 110th Street or in Downtown Brooklyn. Accessory parking facilities are permitted as of right but are not required. During the last few years there has been a rapid buildup of commercial off-street parking capacity in Midtown Manhattan, most of it through the legal loopholes which exist in the ordinance.

- To close these loopholes in the parking regulations, the Planning Commission is proposing zoning amendments which, in effect, will require that accessory parking in high density commercial and manufacturing districts in Manhattan and Downtown Brooklyn be provided on site for use only by employees and customers of the business involved. It is also proposed that a special permit by the Commission be required for more than 50 accessory spaces at any one site in these high density areas.
- Special permits should be issued on private commercial garage development requests in the high density commercial areas of Manhattan and Downtown Brooklyn only if there is a clear demonstration of need for additional parking capacity to be provided by facilities of such design and location as to have a minimum impact on traffic. Large garages in the Midtown and Downtown core areas are the least likely to meet these conditions.
- No municipally financed, tax-free garages of any kind should be constructed in the Manhattan Central Business District, except in conjunction with public development projects outside congested core areas. Specifically, the Commission is opposed to the construction of public garages in the Midtown core area extending from 23rd Street to 59th Street, and from 2nd to 8th Avenues.

This general position was enunciated in the Commission's report on Proposed Municipal Garages for Midtown Manhattan in March 1961.

***HARDENING OUR ARTERIES** More garages in Midtown Manhattan will inevitably attract more motorists, adding to the congestion on already saturated streets. Long queues of cars cause daily bottlenecks outside the Municipal garage at 53rd Street and Eighth Avenue, with resultant delays to other motorists and pedestrians.*



AIR, LAND, AND SEA TERMINAL FACILITIES

New York Harbor and Manhattan Island are the focal points for a complex network of air, land and sea transportation linking the City with the nation and the world. Efficient terminal facilities for these transport systems, properly related to other urban activities, are essential for the continued functioning of the New York metropolis and the passenger and freight transportation arteries which serve it.

AIR AND LAND PASSENGER FACILITIES

New York's position as a national and international metropolis is reflected in the fact that one quarter of the country's domestic air passengers and half of all international air travelers pass through its airports. These facilities are now being strained to capacity by this increasing traffic.

Better utilization of existing airfields could offer immediate relief of growing airport congestion. Conversion of Floyd Bennett Field in Brooklyn from military to general aviation use should be considered, providing appropriate air traffic patterns can be developed. This field, and other smaller airports, might be convenient for executives and businessmen flying in private and corporate aircraft, thus leaving the major airports freer to handle scheduled airline flights.

High-speed intercity rail passenger service in the Northeast Corridor between Washington and Boston is now being strongly promoted by the Federal Government and other interests. This proposed service would greatly improve access between major cities along the Eastern Seaboard, and would help relieve air as well as highway congestion on the approaches to New York and other urban centers. Two-hour rail service from New York to Washington or to Boston, as compared with present four-hour schedules, is required to compete effectively with air shuttle service. If the evolution of such 150 miles per hour train service can be firmly assured within the near future, it may be possible to defer construction of the new Jetport that is being planned

to serve expanding air travel needs in the New York metropolitan area. In any event, planning for future megalopolitan high speed rail operations must be developed in cooperation with the Tri-State Transportation Commission to be sure of coordination with other developments within the New York area, including improved suburban service that will be using the same existing railroad trunk lines.

Also, improved access to airports is needed to provide a better link between long and short distance travel. The possibility of expanded helicopter service to Manhattan and other key points is already on the horizon and should be studied in all of its implications to determine whether such a network is desirable and feasible.

Over the longer range, we should provide high-speed mass transportation service to La Guardia and Kennedy Airports.

PORT FACILITIES

If New York City is to retain its pre-eminence as a port, we must develop new passenger and freight facilities to cope with changing times and technology. The City Planning Commission, in its "Port of New York" report in September 1964, pointed up several important factors affecting the future of the City's port installations:

- The City is in a competitive struggle to retain its port supremacy. The accelerating trend toward containership operations on the North Atlantic run, as well as in coastwise service, underlines the need for spacious, modern facilities providing ample backup space for cargo storage and processing and good land transportation access.
- Manhattan's role as a cargo center, while remaining important, cannot and should not be expanded for this purpose. However, the modernization of existing cargo piers in Manhattan is desirable to improve efficiency and insure continued port-oriented employment in this sector of the port. Emphasis on new development must be concentrated on the Brooklyn

and Staten Island waterfronts which can provide the space and access required to meet modern shipping requirements.

- Manhattan's North River, however, is the ideal location for all of the region's passenger terminal facilities to serve the growing number of cruise passengers and other tourists entering and leaving New York Harbor.

With these points in mind, the Commission recommends that the City give high priority to redevelopment of the Superliner Passenger Terminal on the North River between 43rd and 57th Streets. There is every reason to believe that this

water gateway could provide as attractive and convenient facilities for passengers and visitors as the air gateway at Kennedy Airport. This major terminal could be part of a renaissance of the West Midtown area, including upland development and improved vehicular and transit access.

The City should also promote the redevelopment of the Brooklyn Bay Ridge waterfront, including the Bush Terminal area and Brooklyn Army Terminal, as an ultra modern cargo center including facilities for containerships and processing of the varied and specialized shipments which pass through the Port of New York.



AMERICA'S GATEWAY TO THE SEA High on the Commission's priority list for pier improvements is the development of an international Superliner Terminal on the North River rivalling our new airports in attractiveness and design. The terminal, accommodating growing cruise traffic and other oceanborn passenger needs, would serve as a major economic asset and a tourist attraction in the City.

FINANCING TRANSPORTATION

While proposed transportation improvements will be of great benefit to the people and economy of the City, they will require substantial capital investments. The fact is that urban transportation systems are costly and represent a major share of the public investment that is necessary to support urban development. Thus, half of the City's outstanding debt is for transportation facilities, and the Regional Plan Association has estimated that transportation will absorb 40 per cent of investments for public and quasi-public facilities in the Tri-State region during the next decade or so.

Finding money for transportation improvements is becoming even more difficult in a period when there are increasing demands on the municipal government to provide other and equally needed facilities and services. And this competition for scarce City budget funds will become more intense as New Yorkers' expectations continue to rise.

It is therefore clear that we must marshal all potentially available finances if New York City is to provide both adequate transportation and other essential urban services.

It is to the best interest of the City that transportation, as a whole, be made as self-supporting as possible, consistent with providing low cost transportation for those who cannot afford more. While the full cost of some transportation services cannot and should not be met by user fees alone, other elements operate at a substantial profit. Higher user fees may also be feasible in cases where urban residents are paying less than the cost to the City of providing transportation facilities and services. To the extent that transportation can be made financially self-supporting by pooling profits and losses, more funds can be made available for other community services, such as education and welfare, that can never be self-sustaining.

ARTERIAL HIGHWAYS

Presently available public financial resources are more than adequate to implement arterial highway programs that may realistically be achieved in New York City in the immediate future.

Expenditures of about \$100 million annually for the foreseeable future are estimated to be required for new arterial highways and river crossings, assuming it is desirable and feasible to build a highway network generally serving all areas of the City, except into and through Manhattan. In actuality, increasing resistance to highway construction through developed areas of the City may make it difficult to spend funds at this rate once the "easy" highways in outer areas of the City have been completed.

Federal and State sources are now providing about \$90 million a year for arterial highway construction in New York City, and there is little reason to believe that these programs will not be continued into the future, beyond 1972 when the Interstate Highway Program is scheduled for completion.

In addition, surplus toll revenues from the vehicular river crossings of the Triborough Bridge and Tunnel Authority and the Port of New York Authority may be available to finance additional arterial highway facilities. These surpluses presently total about \$50 million a year, after providing for operating and debt service costs on these facilities. While some of these excess revenues have been earmarked for other committed projects, the surpluses will steadily increase in future years, and may be made available to finance substantial capital improvement programs.

MASS TRANSPORTATION

The New York Region can have a superior mass transportation system if the financing of these facilities is shared by all who have a stake in improved transit. At present, New York City taxpayers and some suburban commuters are alone in paying their fair share of transit costs.

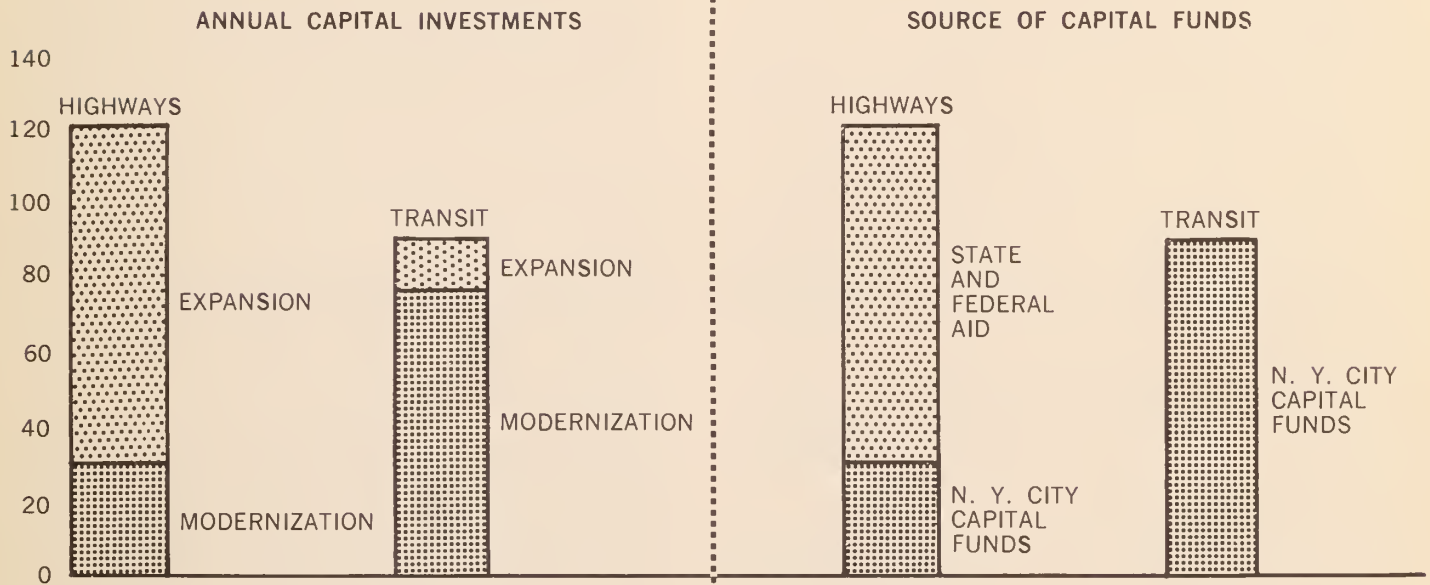
NEW YORK CITY

MASS TRANSIT and HIGHWAY PROGRAMS

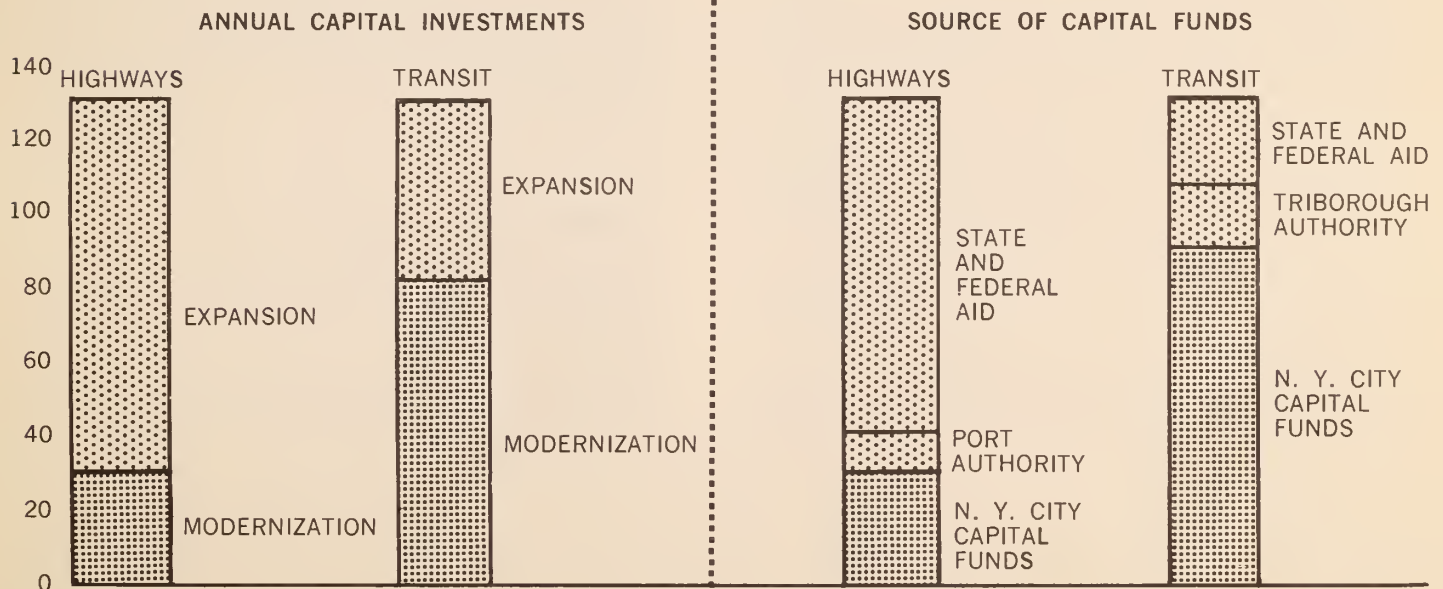
PRESENT AND POSSIBLE FUTURE ANNUAL CAPITAL FINANCING

(IN MILLIONS OF DOLLARS)

PRESENT PROGRAMS



POSSIBLE FUTURE PROGRAMS



In contrast to many other regions which have no rail systems, New York has existing systems which can be readily modified to provide modern service. It is estimated that a capital investment of about \$130 million annually, will be required to improve and expand mass transit systems in New York City during the next decade. These sums, which are within our capability of financing, include \$50 million a year for expanding the capacity of the rail transit network, especially approaching the Manhattan Central Business District.

The City of New York is presently investing about \$90 million a year in improvements to its rapid transit and bus systems. Increasing demands for other municipal services make it questionable whether the City can or should devote more of the resources available within its capital budget debt limit to transit modernization. This is particularly true in light of the probability that operating subsidies, in addition to capital programs, will be required by the City to preserve transit fares at a reasonably low level; it is presently costing the City and the Transit Authority \$60 million a year beyond fare revenues to save the 15 cent fare.

Many transit riders, particularly in outer areas of the City, would probably pay a greater share of the cost of transit service, if they were given the opportunities of a faster, more comfortable ride. Thus, for example, extension of super-subway service into the outlying residential areas would involve a substantially lower transit subsidy than the alternative of providing additional conventional low-fare service to the same areas.

New York State and suburban areas have a financial stake in improved rail transit service beyond the tax relief and other limited subsidies now being extended to the suburban railroads. Other urban regions have developed precedents for broader-based government financing of transit. The Boston region benefits from statewide tax funds devoted to transit improvement, and the San Francisco Bay Area has voted a regional real estate levy to pay for its new transit system.

Increased Federal Aid is the most likely new source of funds for expansion of transit systems in the New York area. While present urban mass

transit aid is limited to a maximum of \$47 million for all of New York State during a 3 year period, growing Federal concern for the welfare of the Nation's cities may soon generate massive Federally-financed programs for transit and other public works. Greatly expanded transit programs, however, cannot be based on as yet indeterminate future Federal programs.

Surplus tolls from profitable vehicular facilities should be used to improve rail transit systems rather than to finance additional highways into the congested core of the region. This principle has been firmly established in the Philadelphia and San Francisco regions, as well as in the case of the Port Authority which is financing modernization of the former Hudson and Manhattan tubes with profits from its vehicular river crossings. (Additional improvements for transit-Hudson rail and bus commuting should be tied into this program.)

Surpluses of about \$20 million annually are potentially available from Triborough Authority vehicular facilities within the City of New York. These funds should be used to finance improved transit services rather than to subsidize an unnecessary Third Tube at the Queens-Midtown Tunnel, or being diverted to a "far out" low priority bridge across Long Island Sound.

Over the longer-range, additional financial pricing and pooling mechanisms may prove useful in developing a balanced transportation system. It is conceivable that Federal Aid might be made available to urban areas for construction of a total transportation system rather than being earmarked for individual highway and transit projects. Greater use of vehicular tolls and parking fees have also been advocated as a means of controlling the volumes of traffic on different facilities entering the congested core of the region.

TERMINAL FACILITIES

Major terminal facilities can be developed on a financially self-supporting basis within the framework of existing agencies and transportation authorities.

The Planning Commission has stressed the high priority need for a new Superliner Passen-

ger Terminal on the North River. This major facility, which has extremely important implications for the economy of the City and its pre-eminence as the ocean gateway to the nation, should be started without delay.

To expedite this vital facility on a scale that would complement our major airports as a regional terminal and a handsome tourist attraction, it may be necessary to take a hard look at all means available toward its development. It may be desirable, in this regard, to consider the feasibility of negotiating with the Port of New York Authority to help develop this terminal. Such a course of action might ease the municipal

budget for other port development purposes and insure a balanced application of the Authority's resources on both sides of the Hudson River.

The question of negotiations with quasi-public agencies has always been a sensitive one in weighing what is best for the City. A careful balance must be drawn between long-range gains to the City's prestige and economy versus the surrender of City land and its earned revenues to an authority. Accordingly, any negotiations must insure satisfactory annual returns to the City in lieu of taxes and the realization of other assets to offset the relinquishing of valuable land rights.

ADMINISTERING TRANSPORTATION

Transportation, more than most urban services, must be considered from a regional point of view. Development of a rational transportation system in the New York area will require closer coordination among the host of public and private agencies which are individually responsible for segments of the picture.

These agencies — each limited to one or more modes, functions, or geographical areas, and operating under differing "ground rules" with respect to public control and financing — are presently restricted to a piecemeal approach to transportation development. Until very recently, for example, there has been complete isolation between agencies responsible for highway and rail transportation. And the City's transit system is operated by one authority financed by municipal funds, while suburban transit is the responsibility of another authority which must operate on a self-supporting basis.

Closer working relationships are now developing among these many agencies, and will continue to evolve over time. One regional transportation agency responsible for development and implementation of programs for all transport modes should be the ultimate objective — it represents a sound goal to be worked toward in stages.

TRI-STATE TRANSPORTATION COMMISSION

The new Tri-State Transportation Commission, which is composed of Federal, State, and local officials responsible for transportation and land planning decisions, is the logical agency to develop comprehensive regional transportation plans and policies.

The Commission has the mandate and resources, including access to Federal transportation planning and capital funds, to consider all phases of transportation in relation to the overall development of the New York Metropolitan area.

Greater participation by local areas within the region, including New York City, will be necessary, however, to make the Tri-State Transportation Commission into a truly regional forum capable of assisting responsible levels of government in arriving at meaningful decisions on transportation development.

TRANSPORTATION POLICY COUNCIL

To better coordinate traffic and transportation development within New York City, the City Planning Commission has recommended that the

Mayor establish a Transportation Policy Council, composed of the heads of agencies responsible for determining and administering transportation plans and programs. It is suggested that this Council, similar in nature to the present Housing Policy Board, be advisory to the Mayor. It should include the top officials of the following agencies:

Bureau of the Budget
City Administrator
City Planning Commission
Department of Highways
Department of Marine and Aviation
Department of Traffic
New York City Transit Authority
Triborough Bridge and Tunnel Authority

This Council should review all major proposals and make recommendations on traffic and transportation policy questions. These recommendations should include study programs and changes in financial and administrative structure that may be required to better meet the City's transportation needs.

Establishment of the Transportation Policy Council, furthermore, would permit the City to "speak with one voice" on transportation matters involving regional and State agencies, including the Tri-State Transportation Commission, the Port of New York Authority, and the Metropolitan Commuter Transportation Authority.

COMPREHENSIVE TRANSPORTATION AGENCY

The coordination of development and pooling of finances necessary to achieve a truly unified transportation system will eventually require consolidation of major transportation operating agencies. The Transit Finance Committee recently appointed by Governor Rockefeller and Mayor Wagner, as well as other State and City bodies, should carefully assess the alternative ways to achieve longer range consolidation of transportation agencies.

Creation of a regional transit Agency combining the New York City Transit Authority, the new Metropolitan Commuter Transportation Authority, and counterpart agencies in New Jersey and Connecticut would make possible an integrated regional network of transit facilities and services.

Another approach that has considerable merit would be to create a New York City Transportation Authority, combining rubber and rail transportation agencies within the City.

The traffic and transit problems of our growing metropolis will be no less complex in the future, and there is no better time than the present to develop a sound strategy to achieve a more rational development of our essential transportation systems.

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